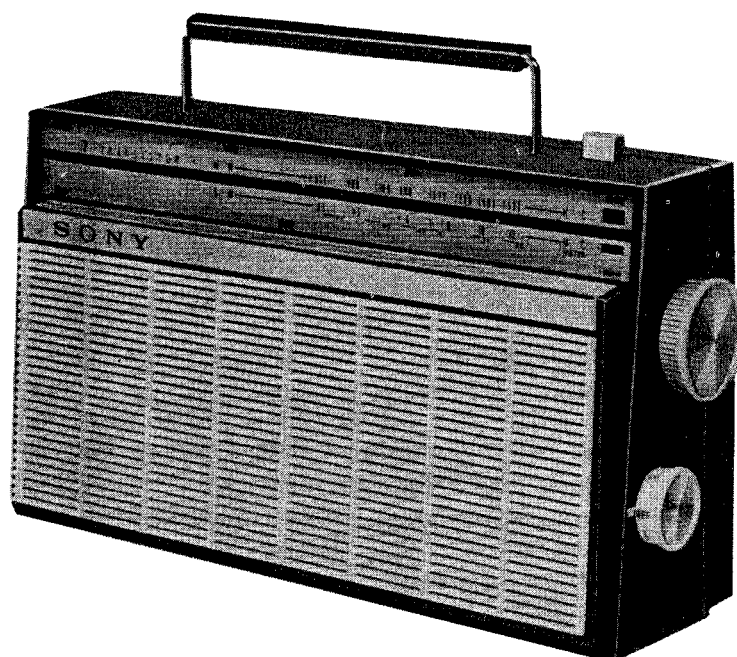


# **SONY® Transistor Radio Circuits** ***1***

## CONTENTS

Model	Page
TR-732 .....	12 to 15
Adjustment Procedures for SONY Radios .....	93 to 94





### Specifications

Circuit :	7 Transistor Superheterodyne
Frequency Coverage :	MW 530~1,605 Kc ( 566~187 m ) SW 3.9~12 Mc ( 77~25 m )
Intermediate Frequency :	455 Kc
Antenna System :	Built-in Ferrite Bar Antenna Auxiliary Antenna Lead
Maximum Sensitivity :	MW 22 $\mu$ V/m with built-in Ferrite Bar Antenna (at 10 mW output) SW 22 $\mu$ V/m with built-in Ferrite Bar Antenna
Selectivity :	17 dB at 10 Kc off resonance, at 1,400 Kc
Output Power :	560 mW (undistorted), 2.12 Volts across 8 $\Omega$ load
Speaker :	4" PM dynamic, 8 $\Omega$
Battery :	Four size "D" Flashlight Batteries ( 6 Volts )
Current Drain :	15 mA at zero signal, 195 mA at 560 mW Output
Dimensions :	11-7/16" $\times$ 6-3/8" $\times$ 3-7/16" ( 290 $\times$ 162 $\times$ 87.5 mm )
Weight :	4.3 lbs. ( 1.95 Kg. )

### Adjustments

#### a) Frequency Coverage Adjustment

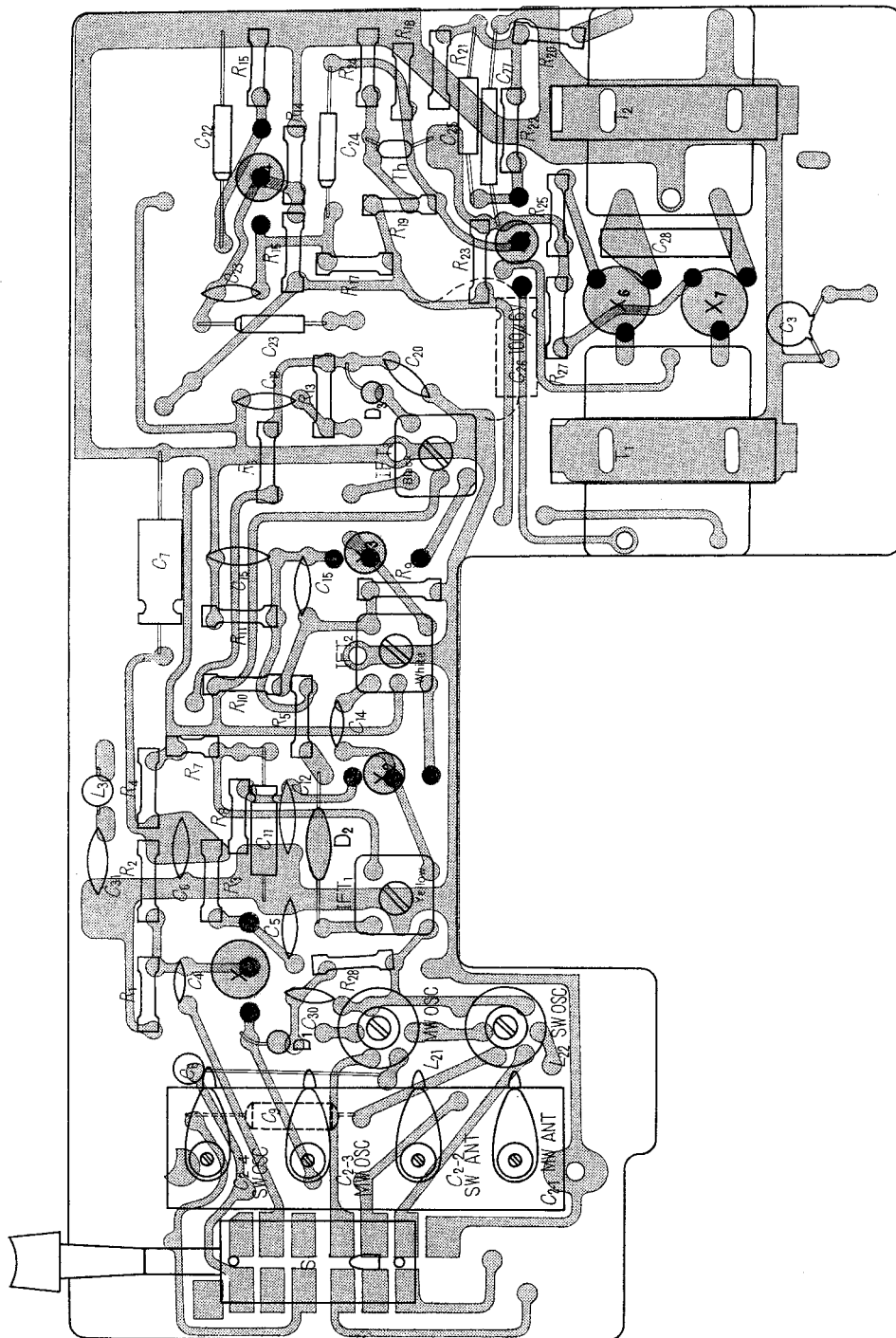
	Lower Limit	Adjust	Upper Limit	Adjust
MW	520 Kc	Core of MW OSC Coil (L <sub>21</sub> )	1,680 Kc	MW OSC Trimmer (C <sub>2-3</sub> )
SW	3.8 Mc	Core of SW OSC Coil (L <sub>22</sub> )	12.6 Mc	SW OSC Trimmer (C <sub>2-4</sub> )

#### b) Tracking Adjustment

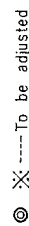
	Lower Checking Point	Adjust	Upper Checking Point	Adjust
MW	620 Kc	Position of MW ANT Coil (L <sub>11</sub> )	1,400 Kc	MW ANT Trimmer (C <sub>2-1</sub> )
SW	3.8 Mc	Position of SW ANT Coil (L <sub>12</sub> )	12.6 Mc	SW ANT Trimmer (C <sub>2-2</sub> )

Mounting Diagram

— Parts Side —

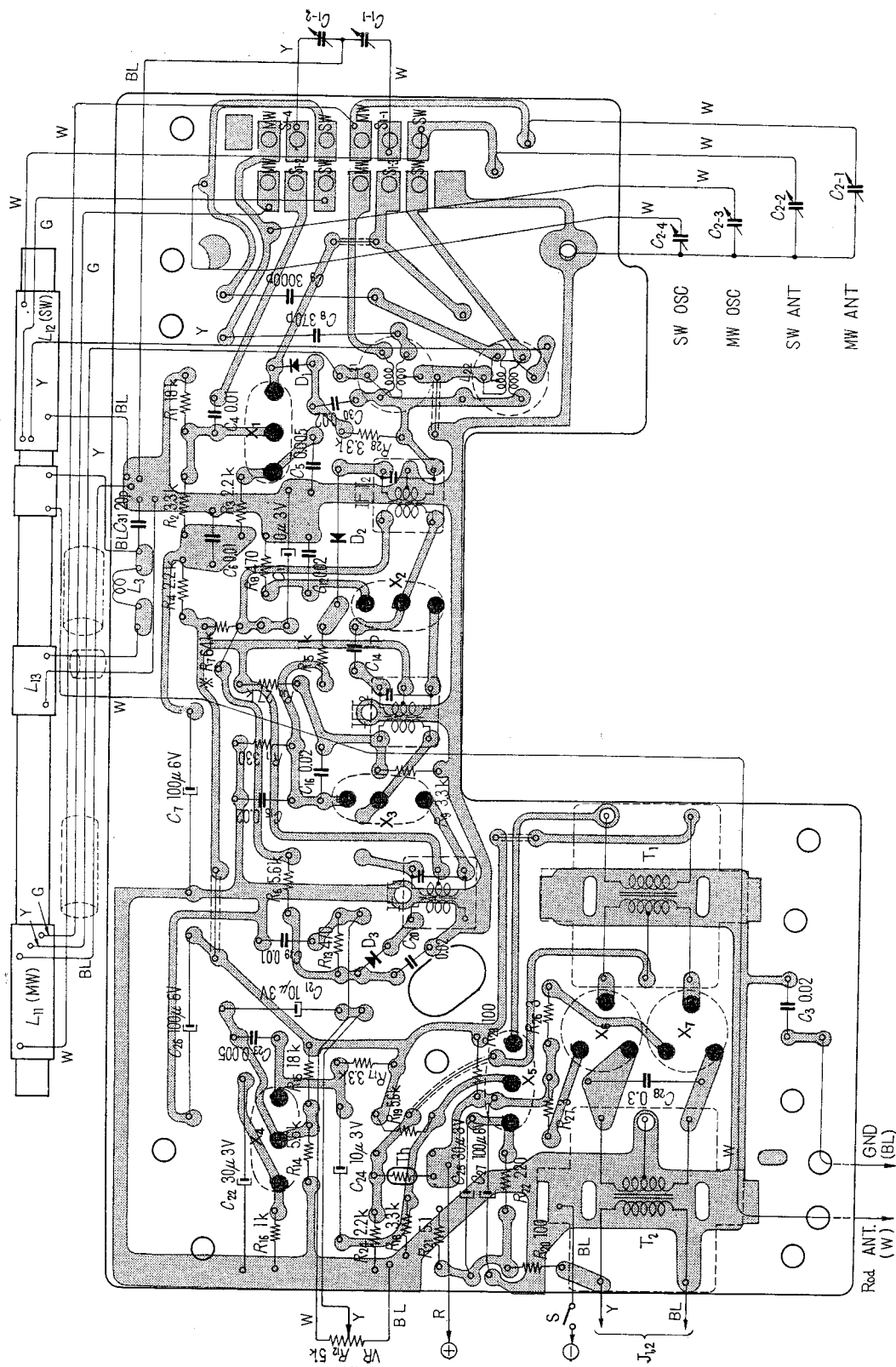


## 38

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**Mounting Diagram**

— Printed Side —



## **MW Band**

### **Frequency Coverage Adjustment**

- (1) Deliver a 520 Kc signal from the SSG.
- (2) Set the Tuning Capacitor at the maximum capacitance position by turning the Tuning Knob of the Receiver counter-clockwise.
- (3) Adjust the core of the MW OSC Coil to tune to the signal.
- (4) Set the Tuning Capacitor at the minimum capacitance position by turning the Tuning Knob of the Receiver clockwise.
- (5) Deliver a 1,680 Kc signal from the SSG.
- (6) Adjust the MW OSC Trimmer Capacitor to tune to the signal.
- (7) Repeat the above procedures (1~6) until the frequency range between 520 Kc and 1,680 Kc is fully covered.

### **Tracking Adjustment**

- (1) Deliver a 620 Kc signal from the SSG.
- (2) Tune to the signal by turning the Tuning Knob of the Receiver.
- (3) Adjust the position of the MW ANT Coil along the Ferrite Bar to obtain the maximum output.
- (4) Deliver a 1,400 Kc signal from the SSG.
- (5) Tune to the signal by turning the Tuning Knob of the Receiver.
- (6) Adjust the MW ANT Trimmer Capacitor to obtain the maximum output.
- (7) Repeat the above procedures (1~6) until the maximum output is obtained.

## **SW Band**

- (1) Set the Tuning Capacitor at the maximum capacitance position by turning the Tuning Knob of the Receiver counter-clockwise.
- (2) Deliver a 3.8 Mc signal from the SSG.
- (3) Adjust the core of the SW OSC Coil to tune to the signal.
- (4) Adjust the core (position) of the SW ANT Coil (along the Ferrite Bar) to obtain the maximum output.
- (5) Set the Tuning Capacitor at the minimum capacitance position by turning the Tuning Knob of the Receiver clockwise.
- (6) Deliver a 12.6 Mc signal from the SSG.
- (7) Adjust the SW OSC Trimmer Capacitor to tune to the signal.
- (8) Adjust the SW ANT Trimmer Capacitor to obtain the maximum output.
- (9) Repeat the above procedures (1~8) until the specified frequency range (3.8~12.6 Mc) is fully covered and the maximum output is obtained.

## **FM Band**

### **Frequency Coverage Adjustment**

- (1) Set the modulation of the SSG to "AM".
- (2) Deliver a 86.5 Mc signal from the SSG.
- (3) Set the Tuning Capacitor at the maximum capacitance position by turning the Tuning Knob of the Receiver counter-clockwise.
- (4) Adjust the core and gap of the FM OSC Coil to tune to the signal.
- (5) Deliver a 108 Mc signal from the SSG.
- (6) Set the Tuning Capacitor at the minimum capacitance position by turning the Tuning Knob of the Receiver clockwise.



- (7) Adjust the FM OSC Trimmer Capacitor to tune to the signal.
- (8) Repeat the above procedures (2~7) until the frequency range between 86.5 Mc and 108 Mc is fully covered.

#### **Tracking Adjustment**

- (1) Set the modulation of the SSG to "AM".
- (2) Deliver a 86.5 Mc signal from the SSG.
- (3) Tune to the signal correctly by turning the Tuning Knob of the Receiver.
- (4) Change the modulation of the SSG to "FM"
- (5) Adjust the FM RF Coil for the maximum reading on the Output Meter.
- (6) Change the modulation of the SSG to "AM"
- (7) Deliver a 108 Mc signal from the SSG.
- (8) Tune to the signal correctly by turning the Tuning Knob of the Receiver.
- (9) Change the modulation of the SSG to "FM".
- (10) Adjust the FM RF Trimmer Capacitor to obtain the maximum output.
- (11) Repeat the above procedures (1~10) until the maximum output is obtained.

**Frequencies used for the above adjustment are a little different with some models.**